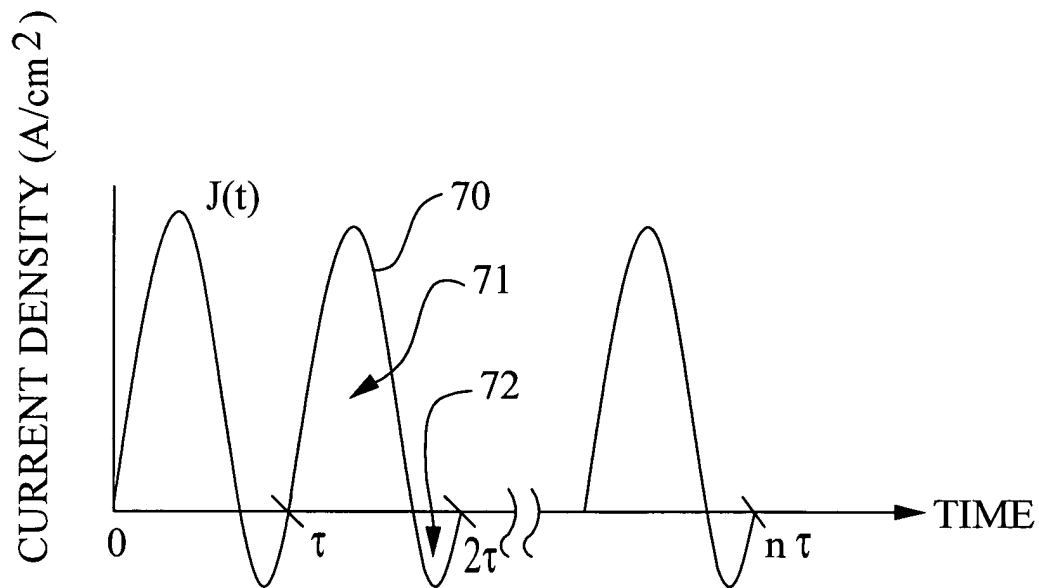


FIG. 1 Prior Art



$$J_{rms} = \left[\left(\int_0^\tau J^2(t) dt \right) / \tau \right]^{1/2}$$

FIG. 2 Prior Art

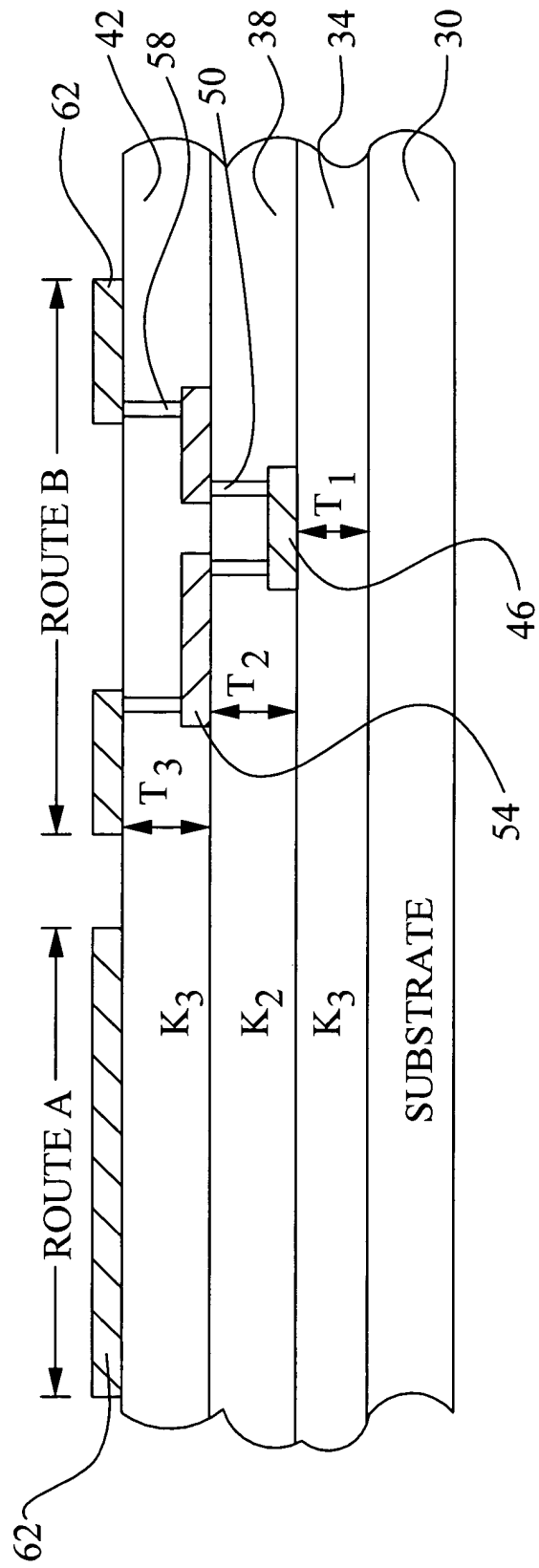


FIG. 3

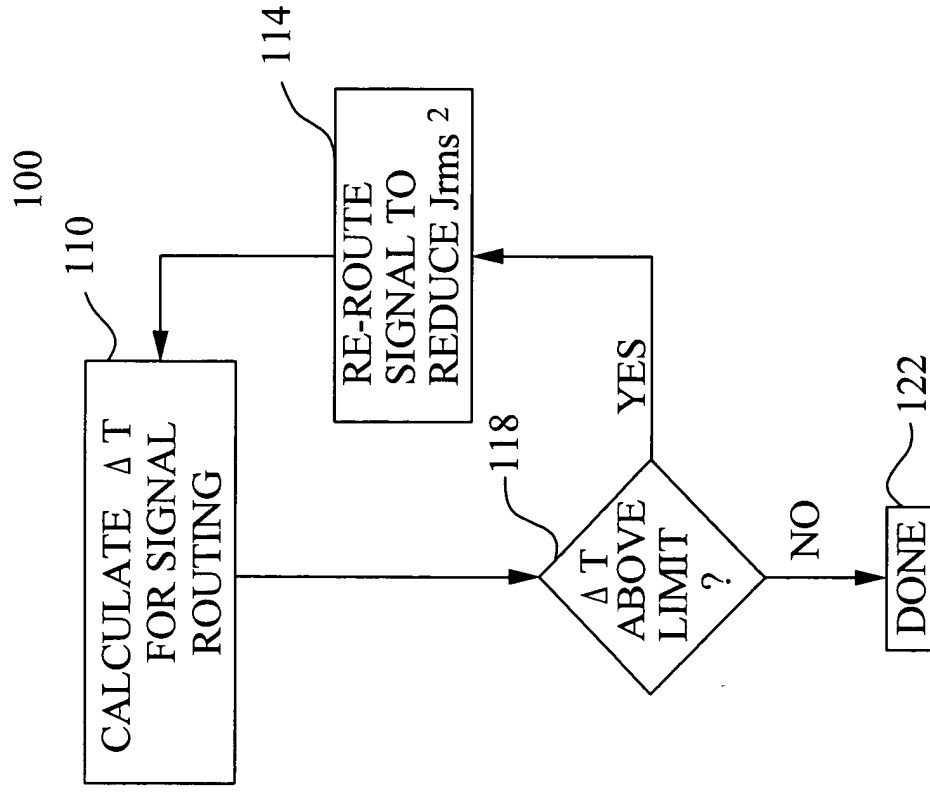


FIG. 4

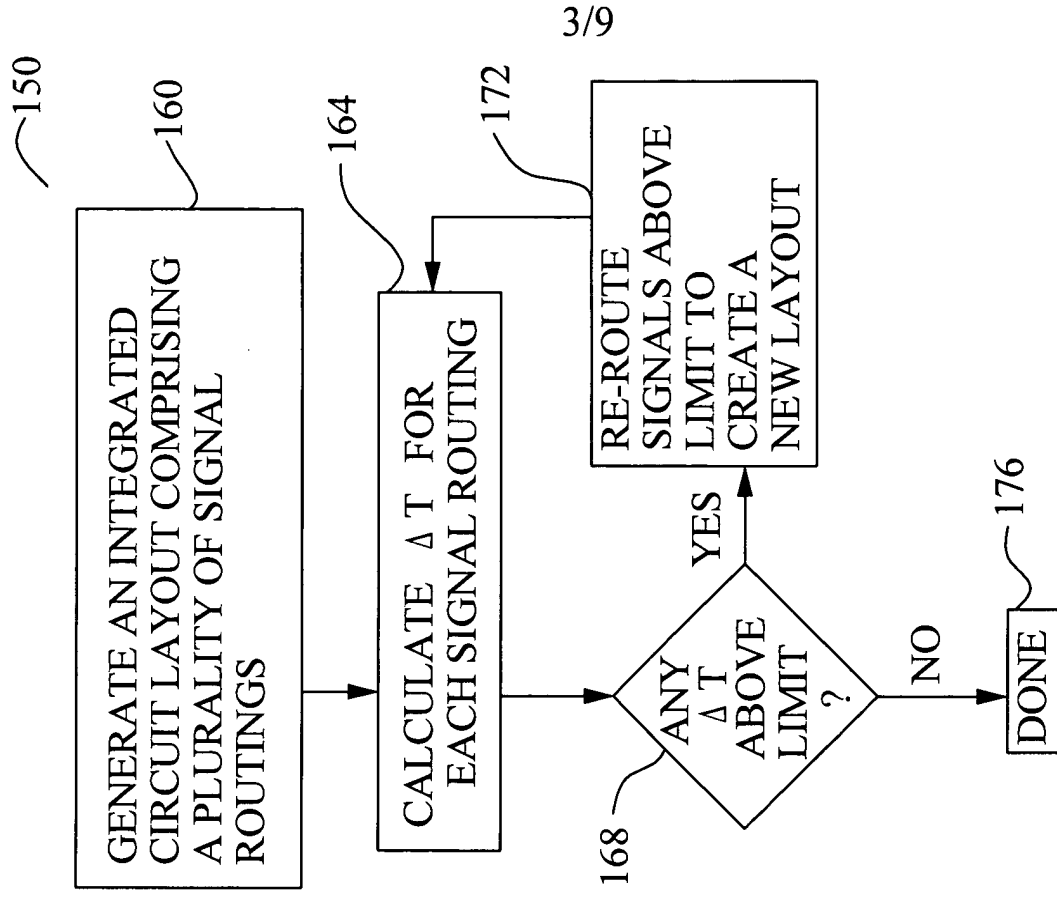


FIG. 5

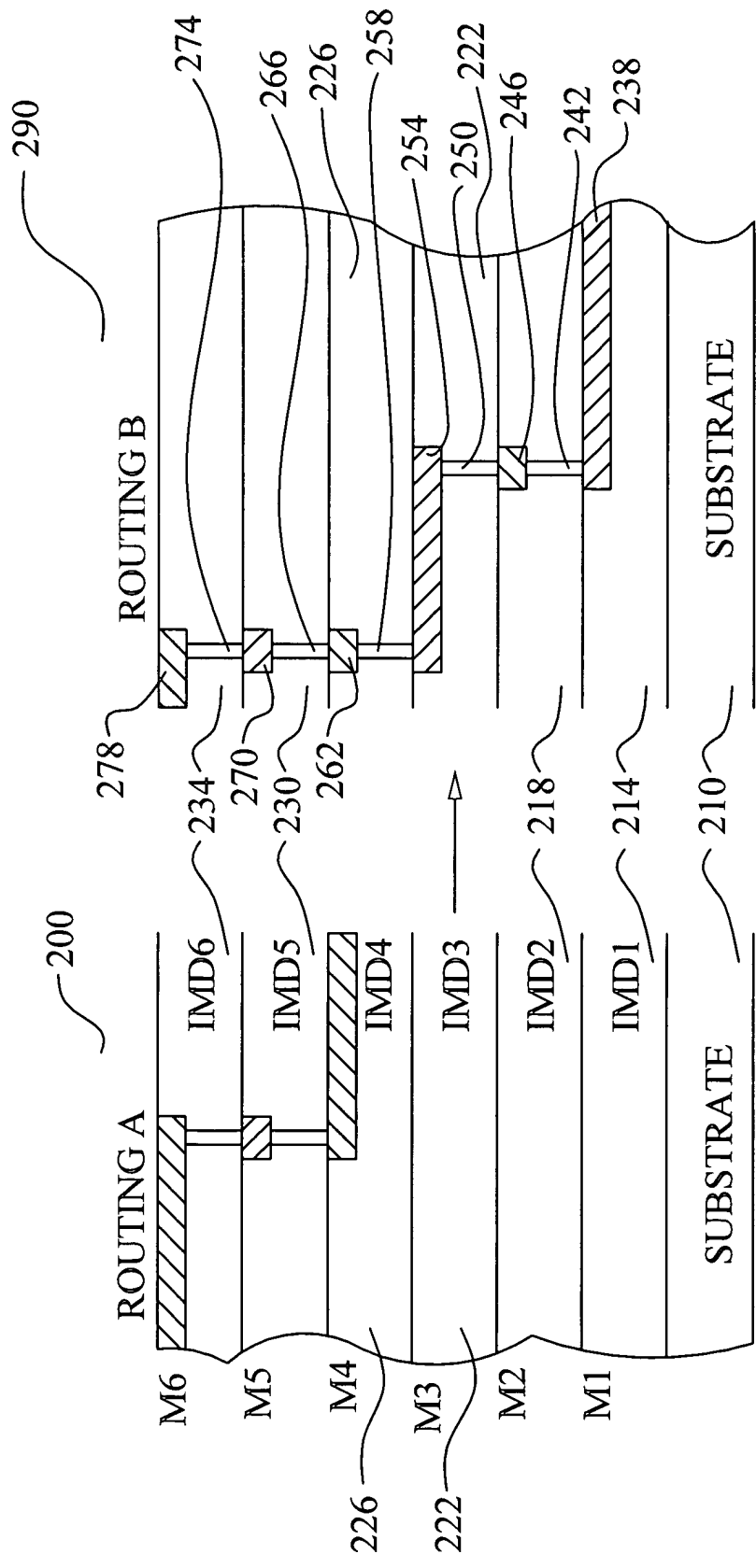


FIG. 6

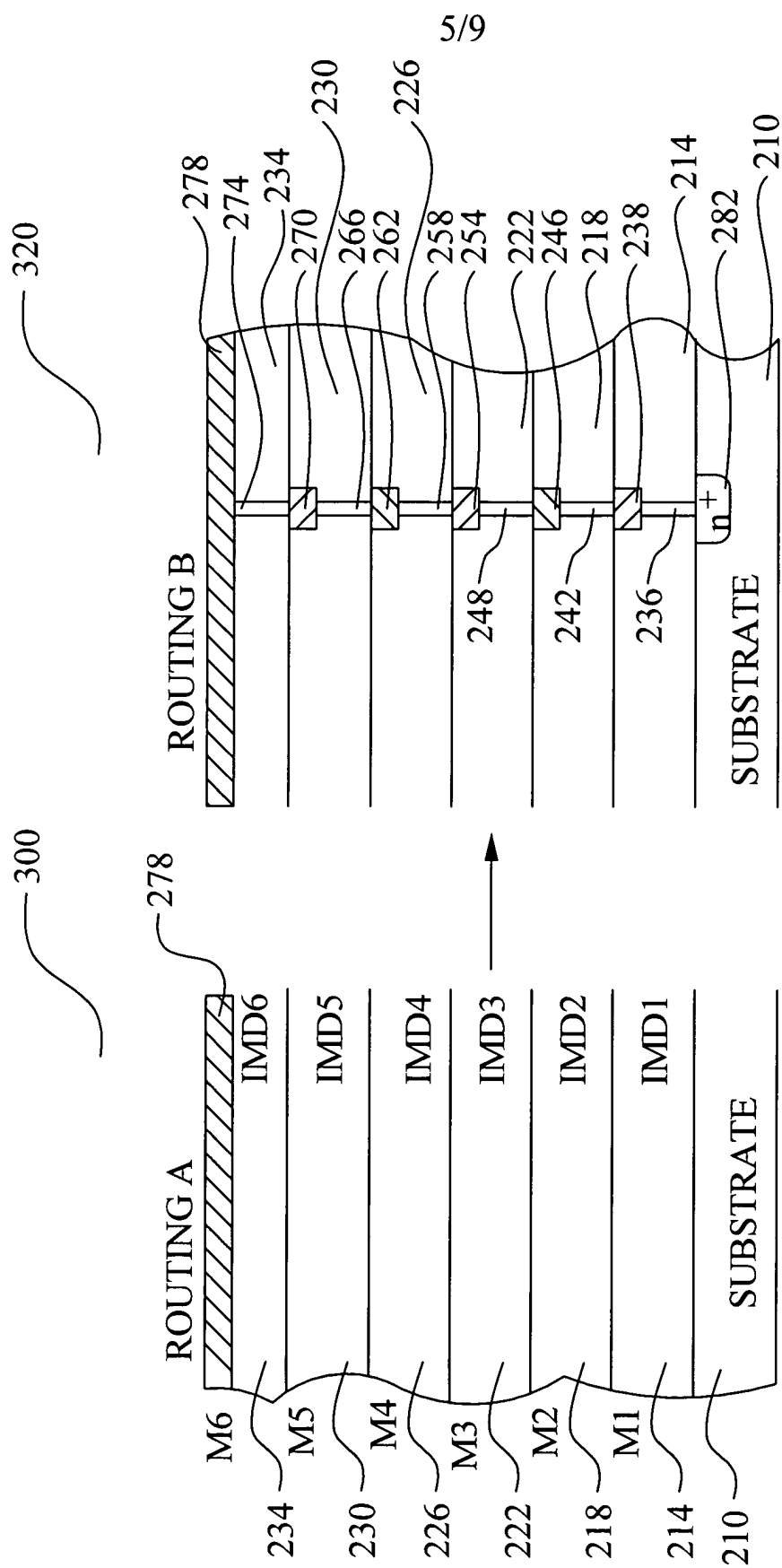


FIG. 7

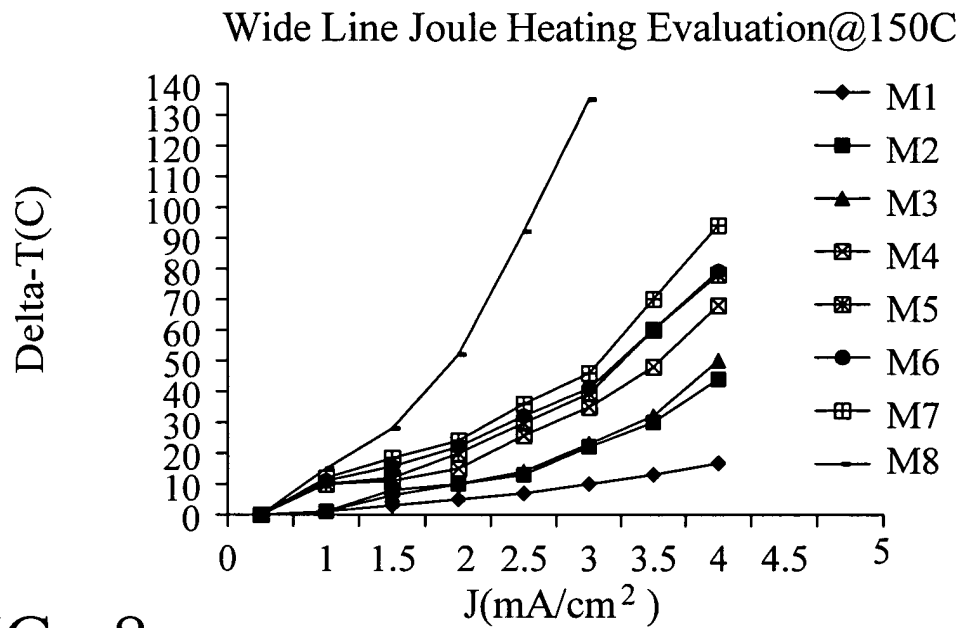


FIG. 8

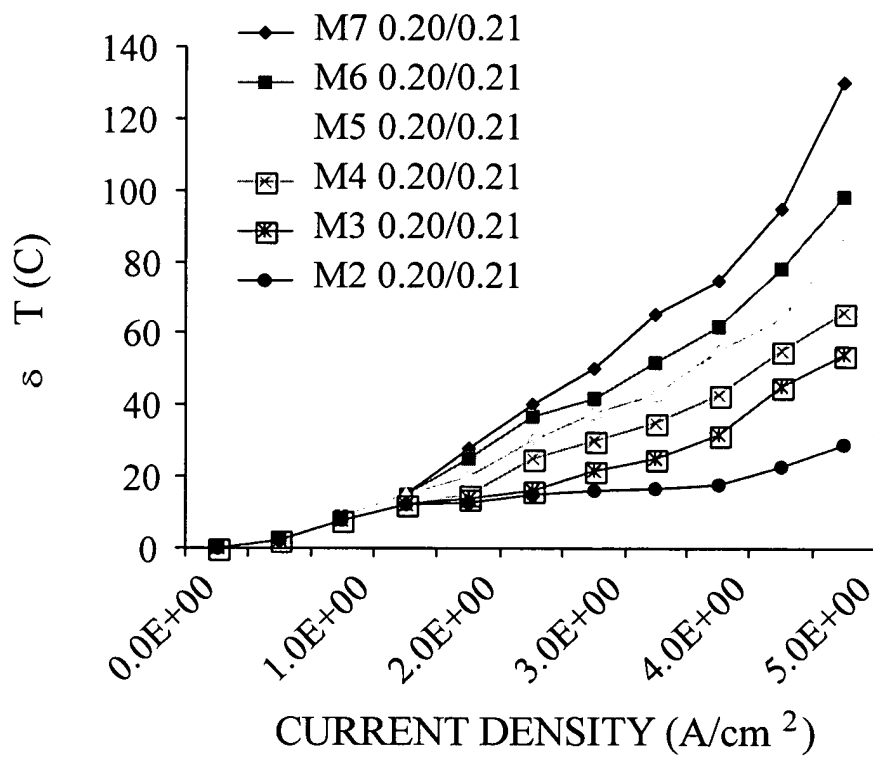


FIG. 9

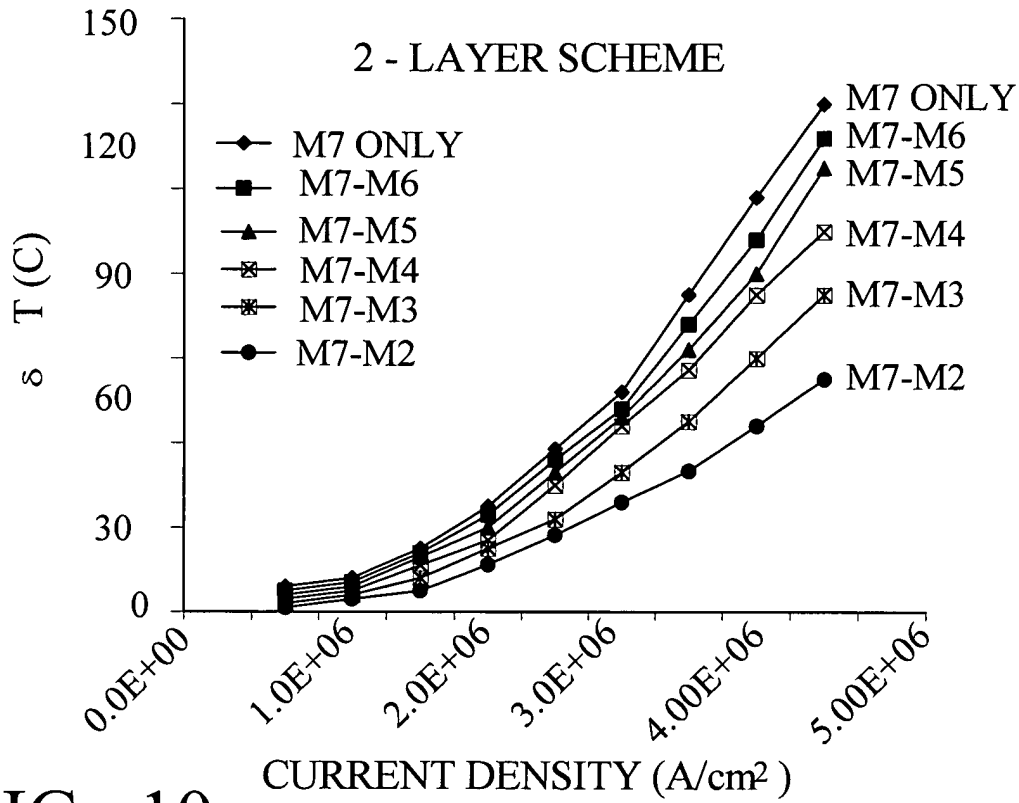


FIG. 10

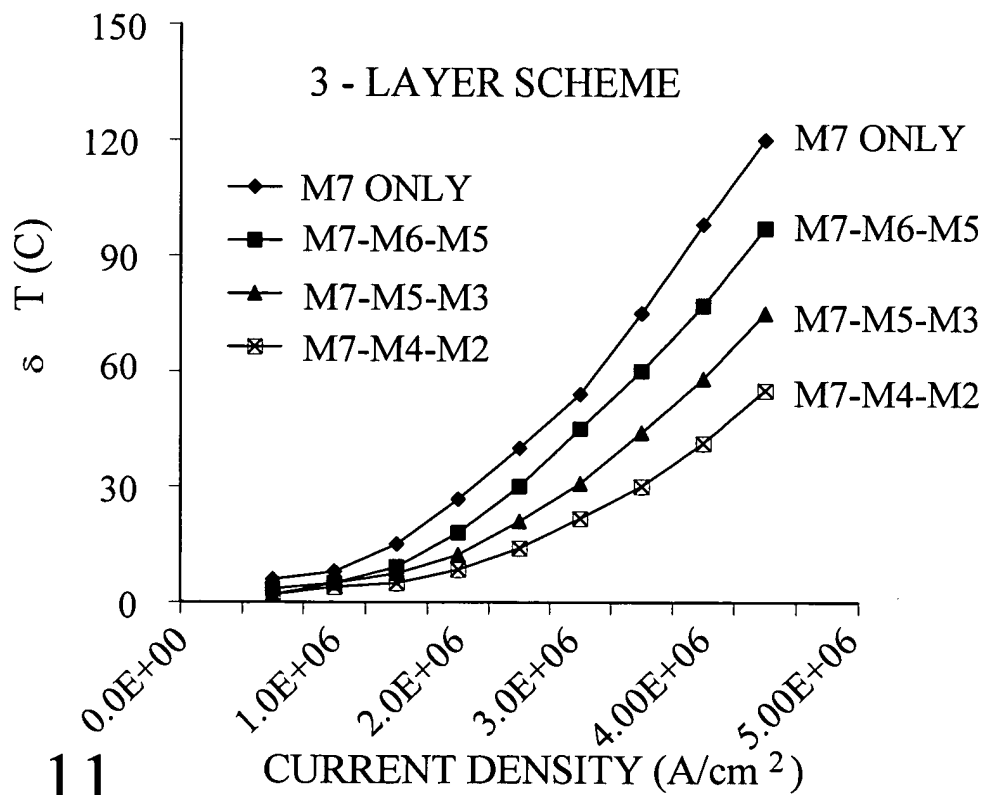


FIG. 11

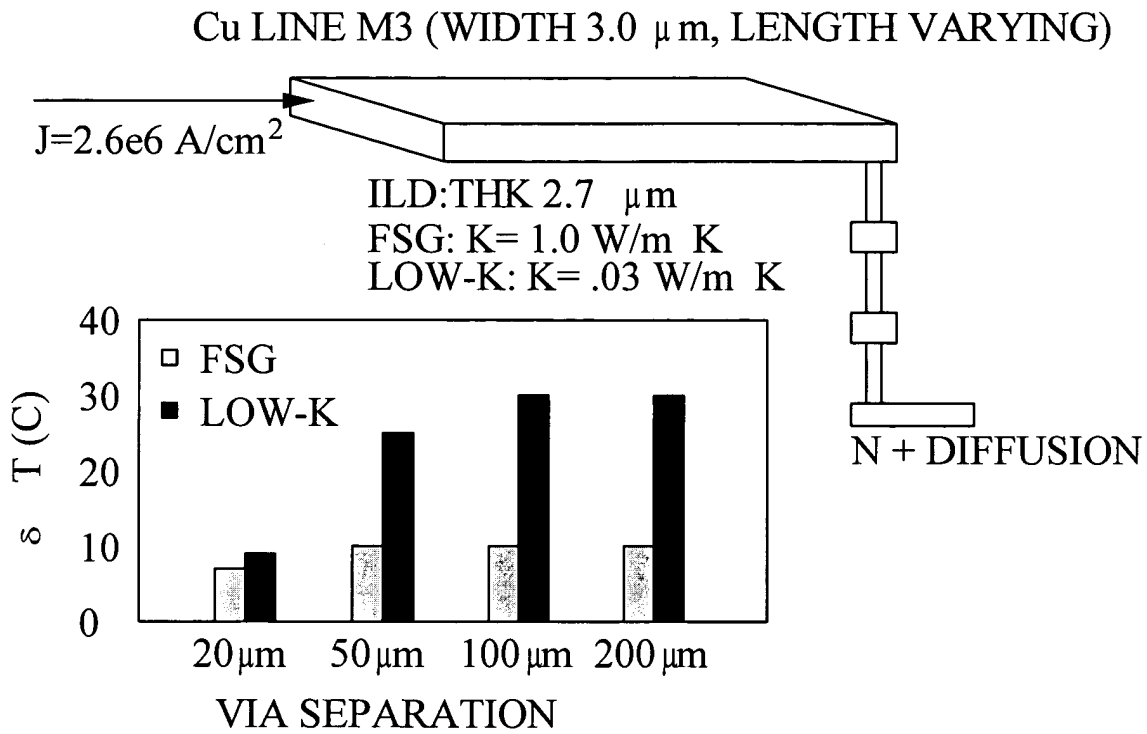


FIG. 12

Cu LINE M8 (WIDTH 3.0 μm , LENGTH VARYING)
 JOULE HEATING COMPARISON (@ $7 \times 10^6 \text{ A/cm}^2$)

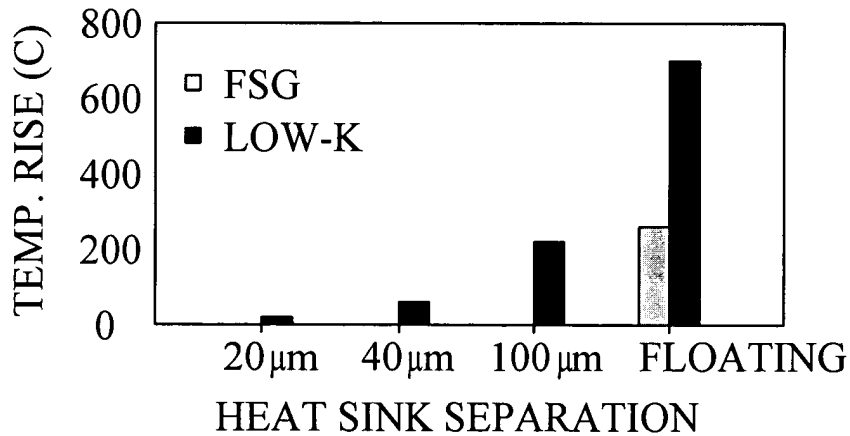


FIG. 13



FIG. 14